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Robert A. Unger

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EXAMINER

FISH, JAMIESON W

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,991

Applicant(s)

UNGER, ROBERT A.

Examiner

Jamieson W. Fish

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received..

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The two information disclosure statements (IDS) submitted have been considered by the examiner.

Claim Objections

2. Claim 1 is objected to because of the following informalities: line 7, change "the tuner input terminal" to --an **interface** input terminal--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawaguchi et al. (US# 6,271,893).
5. Regarding claim 21, Kawaguchi teaches a broadcast receiver (See Fig. 1 TV receiver 4) comprising: means for monitoring a user-input device for a power-on instruction (See Fig. 1 I/O Devices 227, Controller 225, Switches 231 and 232, and Col. 4 lines 24-58 The Controller monitors the I/O devices for user command to execute. The Controller executes powering on the receiver by closing Switches 231 and 232. It

is inherent that the I/O device must include power-on instructions so that the user can power-on the receiver to view channels); display means for indicating a power-on condition for the receiver in response to the power-on instruction (See Fig. 1 Switches 231 and 232, Video & Audio Output Devices 218 and Col. 4 lines 1-12, 38-59. Power-on condition is when both switches are closed. Power off condition is when switch 232 is open. It is inherent that the Video Output Device will display an image when powered-on.); means for monitoring the user-input device for a power-off instruction (See Fig. 1 I/O Devices 227, Controller 225, Switches 231 and 232, and Col. 4 lines 24-58. The Controller monitors the I/O devices for user command to execute. The Controller powers off the receiver by opening Switches 231 and 232. It is inherent I/O device must include power-off instructions so that the user can power-off the receiver); means responsive to the power-off instruction for indicating a power-off condition for the receiver (See Fig. 1 Video & Audio Output devices 218 and Col. 4 lines 1-12. It is inherent that Video Output Device will not display an image when powered-off.); and means for monitoring a broadcast communication channel for a wake-up instruction with the receiver in the power-off condition (See Fig. 1 Communication IF 228, Controller 225, and Switches 231 and 232 and Col. 4 lines 24-58 The Controller monitors the Communication IF for program information. For the Controller to receive program information "at anytime" from the off state (both Switches open) it must receives a wake-up signal from the Communication IF).

6. Regarding claim 22, Kawaguchi further teaches wherein the means for monitoring the broadcast communication channel includes a power switch for providing

power to a processor in response to the wake-up instruction (See Fig. 1 Switch 231 and Signal processor 211 and Col 4. lines 43-53. Wake-up instruction closes Switch 231 which provides power to Processor 211).

7. Regarding claim **23**, Kawaguchi further teaches wherein the display means indicates the power-off condition when the power switch provides power to the processor in response to the wake-up instruction (See Kawaguchi Fig. 1 Switch 231, 232, Video & Audio Output Devices 218, and Col. 4 lines 38-59. Wake-up condition only closes switch 231, thus Processor 211 is powered on and Video & Audio Output Devices are still powered off. It is inherent that when the Video Output Device is powered off it does not display an image).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims **1-2, 4-9, 11,13-15**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuyama (U.S. #6,658,231) in view Kawaguchi

10. Regarding claim **1**, Nakatsuyama teaches a broadcast receiver comprising: a power supply having a power-supply output terminal (See Fig. 6 Power System 276 and Col. 13 lines 45-50) and a broadcast interface circuit including: an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals on the

Art Unit: 2616

interface input terminal, each signal modulated about a selected carrier frequency (See Fig. 6 Tuning system 252 and antenna 253 and Col. 12 lines 60-63. It is inherent that program data signals received by the antenna and the tuner must be modulated about a selected carrier frequency); a tuner having a tuner input terminal connected to the interface input terminal, wherein the tuner is adapted to select one of the signals and provide the selected signal on a tuner output terminal (See Fig. 6 Antenna 253 and Tuner System 252 See Col. 12 lines 57-67 Tuners by definition are adapted to select one of a plurality of broadcast signals and provide the selected signal to the output terminal. In this case the selected signal is the index signal); a wake-up sensor having a wake-up sensor input terminal connected to the interface input terminal and a sensor output terminal, the sensor being adapted to produce a wake-up signal on the sensor output terminal in response to first selected signal (See Fig. 6, Tuning System 252, Logic Unit 250, Antenna 253, and Demodulator 254 and Col. 2 lines 60-65, Col. 7 lines 33-38, Col. 12 lines 57-67, Col. 14 lines 41-50. Nakatsuyama teaches that the receiver can be in low-power mode when not receiving or processing program data. It is inherent that in low-power mode some circuitry used to receive and process program data is powered off. It is inherent that the receiver must power on this circuitry to receive and process program data. The receiver powers on this circuitry based on received tuning data which is contained in the index signal which contains information regarding when program data is to be received. The parts of the Tuning System, Demodulator, and Logic Unit that are electronically coupled to the Antenna (Input Terminal) that receive index signal (first selected signal) and power on circuitry

Art Unit: 2616

necessary to receive and process program data in response to tuning data are the wake-up sensor). Nakatsuyama does not specifically teach a wake-up switch having a wake-up-switch input terminal connected to the power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal. In the same field of endeavor Kawaguchi teaches a digital TV broadcast system having a wake-up switch comprising a wake-up-switch input terminal connected to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal (See Fig. 1 Switch 231 Power Supply 230 and Col. 4 lines 43-48). It would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi such that Nakatsuyama included a wake-up switch as claimed. The motivation for such a modification would have been providing an efficient way to power up and power down the electronic circuitry associated with receiving program information.

11. Regarding claim 2, Nakatsuyama and Kawaguchi teaches the wake-up sensor further including a second tuner tuned to a carrier frequency associated with the first selected signal (See Nakatsuyama Col. 8 lines 21-22 and Col. 12 lines 57-66 One tuner is tuned to a channel to receive index data (first selected signal)).

12. Regarding claim 4, Nakatsuyama and Kawaguchi teaches wherein the tuner includes a power terminal connected to the wake-up-switch output terminal (See Kawaguchi Fig. 1 Switch 231, Received Signal Processor 211, Tuner 213 and Col. 4

Art Unit: 2616

lines 1-3, 43-48 The Received Signal Processor which comprises the Tuner is connected to the wake-up switch output terminal).

13. Regarding claim 5, the modified Nakatsuyama teaches a receiver further comprising a display capable of indicating a power-on condition for the receiver (See Nakatsuyama Fig. 6 Display system 260 and Col. 13 lines 9-21 It is well known in the art that conventional display systems are capable of indicating their power condition i.e. whether they are off or on). Nakatsuyama fails to disclose where the display has a power input terminal connected to the power supply via a second switch. Kawaguchi does teach the display has a power input terminal connected to the power supply via a second switch (See Kawaguchi Fig. 1 Switch 232, Output portion 212, Video and Audio Output Devices 218 and Col. 4 lines 8-12, 43-48). It would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi so that Nakatsuyama's display has a power input terminal connected to the power supply via a second switch. The motivation for a second switch would have been the ability to power the display system independent of the other components.

14. Regarding claim 6, in the modified Nakatsuyama where power is independently delivered to the display system and the program receiving circuitry, it would have been obvious that the display does not indicate a power-on condition in response to the wake-up signal, since the wake-up signal only powers on the receiving circuitry and thus the display system would remain off and indicate such (See Kawaguchi Fig. 1 Switch 231, 232, and Col. 4 lines 38-59).

15. Regarding claim 7, the modified Nakatsuyama discussed in regards to claim 1, teaches a receiver further comprising a processor having a processor power terminal connected to the wake-up-switch output terminal (See Kawaguchi Fig. 1 received signal processor 211 and Col. 4 lines 43-48).

16. Regarding claim 8, Nakatsuyama teaches a broadcast communication network comprising: broadcast head-end adapted to broadcast a plurality of signals about a corresponding plurality of carrier frequencies (See Fig. 6 and Col 2 lines 1-30), the signals including an occasional wake-up instruction (See Col. 7 lines 32-49 and Col. 12 lines 15-18 Index signal is used to wake-up receiving and processing circuitry); a plurality of receivers adapted to receive the plurality of signals (See Col. 4 lines 12-15 each end user's receiver), each receiver including: a power supply having a power-supply output terminal (See Fig. 6 Power System 276 and Col. 13 lines 45-50); and a broadcast interface circuit including: an interface-circuit input terminal adapted to receive a plurality of broadcast communications signals on the tuner input terminal, each signal modulated about a selected carrier frequency (See Fig. 6 Tuning system 252 and antenna 253 and Col. 12 lines 60-63. It is inherent that program data signals received by the antenna and the tuner are modulated about a selected carrier frequency); a wake-up sensor having a sensor input terminal connected to the interface input terminal and a wake-up-sensor output terminal, the wake-up sensor being adapted to produce a wake-up signal on the wake-up-sensor output terminal in response to first selected signal (See Fig. 6, Tuning System 252, Logic Unit 250, Antenna 253, and Demodulator 254 and Col. 2 lines 60-65, Col. 7 lines 33-38, Col. 12 lines 57-67, Col. 14

Art Unit: 2616

lines 41-50. Nakatsuyama teaches that the receiver can be in low-power mode when not receiving or processing program data. It is inherent that in low-power mode some circuitry used to receive and process program data is powered off. It is inherent that the receiver must power on this circuitry to receive and process program data. The receiver powers on this circuitry based on received tuning data which is contained in the index signal which contains information regarding when program data is to be received. The parts of the Tuning System, Demodulator, and Logic Unit that are electronically coupled to the Antenna (Input Terminal) that receive index signal (first selected signal) and power on circuitry necessary to receive and process program data in response to tuning data are the wake-up sensor); Nakatsuyama does not specifically teach a wake-up switch having a wake-up-switch input terminal connected to the power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal. In the same field of endeavor Kawaguchi teaches a digital TV broadcast system having a wake-up switch comprising a wake-up-switch input terminal connected to a power-supply output terminal, a wake-up-switch output terminal, and a wake-up-switch control terminal connected to the wake-up-sensor output terminal (See Fig. 1 Switch 231, Power Supply 230 and Col. 4 lines 43-48). It would have also been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi such that the system taught in Nakatsuyama included a wake-up switch as claimed. The motivation for such a modification would have been providing an efficient way to power up and power down the electronic circuitry associated with receiving program information.

17. Regarding claim **9**, the modified Nakatsuyama teaches the wake-up sensor further including a second tuner tuned to a carrier frequency associated with the first selected signal (See Nakatsuyama Col. 8 lines 21-22 and Col. 12 lines 57-66).
18. Regarding claim **11**, the modified Nakatsuyama teaches the interface circuit including a second tuner having a tuner input terminal connected to the interface input terminal, wherein the second tuner is adapted to select one of the signals and provide the selected signal on a tuner output terminal (See Nakatsuyama, Fig. 6 Antenna 253 and Tuner System 252 and Col. 12 lines 60-63; the electrical coupling is the input and output terminals);
19. Regarding claim **13**, the modified Nakatsuyama teaches wherein the second tuner includes a power terminal connected to the wake-up-switch output terminal (See Kawaguchi Fig. 1 Switch 231, Received Signal Processor 211, Tuner 213 and Col. 4 lines 1-3, 43-48 The Received Signal Processor which comprises the Tuner is connected to the wake-up switch output terminal).
20. Regarding claim **14**, the modified Nakatsuyama teaches a receiver further comprising a display capable of indicating a power-on condition for the receiver (See Nakatsuyama Fig. 6 Display system 260 and Col. 13 lines 9-21. It is inherent that conventional display systems are capable of indicating a power condition i.e. whether they are off or on). Nakatsuyama fails to disclose where the display has a power input terminal connected to the power supply via a second switch. Kawaguchi does teach the display (Fig.1, Video/Audio Output Device 218) has a power input terminal connected to the power supply (230) via a second switch. (See Kawaguchi Fig. 1 Switch 232 and

212 Output portion). It would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama with Kawaguchi so that Nakatsuyama's display had a power input terminal connected to the power supply via a second switch. The motivation for a second switch would have been the ability to power the display system independent of the other components.

21. Regarding claim **15**, in the modified Nakatsuyama where power is independently delivered to the display system and the program receiving circuitry, it would have been obvious that the display does not indicate a power-on condition in response to the wake-up signal, since the wake-up signal only powers on the receiving circuitry and thus the display system would remain off and indicate such (See Kawaguchi Fig. 1 Switch 231, 232, and Col. 4 lines 38-59).

22. Claims **16-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi et al. (US# 6,271,893) in view of Kimoto et al. (US #6,054,981).

23. Regarding claim **16**, Kawaguchi teaches a method of reducing power usage in a broadcast receiver (See Col. 8 lines 2-5), the method comprising: monitoring, in a standby mode (See Col. 4 lines 38-43 when only the controller, I/O devices and the IF are powered, the receiver is in standby mode), a user-input device for a power-on instruction (See Col. 4 lines 24-34 I/O devices 227, it is inherent that controlling the digital receiver would include a powering-on instruction); monitoring the user-input device for a power-off instruction (See Col. 4 lines 24-34 I/O devices 227, it is inherent that controlling the digital receiver would include a powering-off instruction); and monitoring, with the receiver in the standby condition, a broadcast communication

Art Unit: 2616

channel for a wake-up instruction (See Fig. 1 Second transmission media 5, Communication IF 228, Switch 231 Col. 4 lines 34-59 and Fig. 9 Step 444 Turn on the switch 231 and Col. 8 lines 25-30 turning on the switch 231 wakes-up the receiver). Kawaguchi does not specifically disclose indicating a power-on condition for the receiver in response to the power-on instruction or indicating a standby condition for the receiver in response to the power-off instruction. However, Kawaguchi's does teach an indicator (See Col. 7 lines 37-40) and indicating various power modes for an electronic device is well known in the art as taught in Kimoto (See Fig 3. and Col. 4 lines 37-42). It would have been obvious to one of ordinary skill in the art to modify Kawaguchi with Kimoto to indicate a power-on condition for the receiver in response to the power-on instruction or indicate a standby condition for the receiver in response to the power-off instruction, as well as indicating the appropriate power mode of the receiver at any given time during the receiver's operation. The motivation for such a modification would have been so that the various power modes could be displayed.

24. Regarding claim 17, the modified Kawaguchi, discussed in regard to claim 16, further teaches upon receipt of the wake-up instruction (See Kawaguchi Fig. 9 Step 444 Turn on the Switch 231 and Col. 8 lines 25-30), providing power to a first portion of the receiver (See Kawaguchi Fig. 1 Switch 231 and Col. 4 lines 43-48. When Switch 231 is closed power is provided to Non-Volatile Memory 226 and received signal processor 211) and receiving a receiver update (See Kawaguchi Fig. 7A Update the corresponding Record 462 Col. 7 line 67 Col. 8 line 1) and indicating a standby

Art Unit: 2616

condition for the receiver while receiving a receiver update (See Kimoto Fig. 4 Blocks 104 and 105 and Col. 6 lines 19-25).

25. Regarding claim **18**, the modified Kawaguchi teaches upon receipt of a power-on instruction in the standby condition providing power to the first portion and a second portion of the receiver (See Col. 4 lines 58-59 when both switches are closed first portion discussed with regards to claim 17 and output portion 212 are powered) and indicating the power-on condition (See discussion regarding claim 16).

26. Regarding claim **19**, the modified Kawaguchi further teaches indicating a power-on includes providing a video signal to a video display device (See Col. 4 line 8-12 It is inherent that a video signal is provided to a video display device in response to a power-on instruction).

27. Regarding claim **20**, the modified Kawaguchi further teaches a user input device (See Fig. 1 I/O devices 227 and Col. 4 lines 24-33). Kawaguchi does not explicitly state that the user interface device comprises an infrared receiver. The examiner takes Official Notice that a user interface device comprising an infrared receiver is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify Kawaguchi so that its interface device comprises an infrared receiver. The motivation for such a modification would have been the ability to control the receiver remotely.

28. Claims **3, 10, 12** rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuyama (U.S. #6,658,231) in view Kawaguchi above, and further in view of Krakirian (US 2002/0073423).

Art Unit: 2616

29. Regarding claims **3** and **10**, Nakatsuyama as modified by Kawaguchi teaches the broadcast signals are already digitized when the receiver receives them (See Abstract). Nakatsuyama does not include a digitizer in his receiver. However, analog broadcast systems with receivers that include analog tuners and digitizers where the digitizer is connected between the tuner and an output that requires a digital input are well known in the art as disclosed in Krakirian (See Fig. 1 A/D Converter 16 and Paragraph 31). In light of the teaching from Krakirian, it would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama and Kawaguchi such that it includes a digitizer connected between the tuner and the wake-up-switch control. The motivation of such a modification would have been having a receiver capable of receiving an analog signal that can communicate with digital circuitry.

30. Regarding claim **12**, Nakatsuyama as modified by Kawaguchi teaches a processor (See Fig. 6 Logic Unit 250 and Col. 12 57-60). Nakatsuyama teaches the broadcast signals are already digitized when the receiver receives them (See Abstract). Nakatsuyama does not include a digitizer in his receiver. However, analog broadcast systems with receivers that include analog tuners and digitizers where the digitizer is connected between the tuner and a processor well known in the art as disclosed in Krakirian (See Fig. 1 16 A/D converter and Paragraphs 30 and 31). In light of the teaching in Krakirian, it would have been obvious to one of ordinary skill in the art to further modify Nakatsuyama and Kawaguchi such that it includes a digitizer connected between the tuner and the processor. The motivation of such a modification would have

Art Unit: 2616

been having a receiver capable of receiving an analog signal that can communicate with digital circuitry.


Conclusion

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamieson W. Fish whose telephone number is 703-305-0884. The examiner can normally be reached on 8-5.

32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Vu can be reached on 703-305-4946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JF 11/23/2004


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